

CLAIMS

1. An on-vehicle component fixation-release apparatus that releases the fixation of on-vehicle components attached to a vehicle body by a fastening member, comprising:

a dismantling means that enables dismantling of the fastening member or a fastening portion at which the fastening member is mounted, and

a determination means that determines whether the dismantling by the dismantling means is allowed in accordance with an input signal that is input from an outside.

2. The on-vehicle component fixation-release apparatus according to claim 1, further comprising

an electrical storage means that supplies electrical power required for executing dismantling by the dismantling means.

3. The on-vehicle component fixation-release apparatus according to claim 1 or claim 2, wherein

the fastening member or the fastening portion is formed by at least two detachably fixed members including a shape memory member that is formed with a shape memory alloy and another member that is formed with a material other than the shape memory alloy,

the on-vehicle component fixation-release apparatus further comprising a heating means that, in accordance with the determination result of the determination means, heats the shape memory member until the temperature of the shape memory member is equal to or greater than a transformation point of the shape memory member.

4. The on-vehicle component fixation-release apparatus according to claim 1 or claim 2, wherein

the fastening member or the fastening portion is formed by at least two detachably fixed members that are formed with materials having mutually different expansion coefficients; with a convex insertion portion formed on a member with a relatively small expansion coefficient, and a concave or hole-shaped engagement portion that has a predetermined interference with respect to the insertion portion formed on a member with a relatively large expansion coefficient; and the insertion portion fixed to the engagement portion in a state of being inserted therein and interference fitted, and

the on-vehicle component fixation-release apparatus further comprising a heating means that, in accordance with the determination result of the determination means, heats the member until the fixation state between the insertion portion and the engagement portion is released.

5. The on-vehicle component fixation-release apparatus according to claim 1 or claim 2, wherein

the fastening member or the fastening portion includes a fragile portion, and the dismantling means functions as a separation actuator that separates the fastening member or the fastening portion at the fragile portion in accordance with the determination result of the determination means.

6. The on-vehicle component fixation-release apparatus according to claim 5, wherein

the separation actuator includes

a separation member that is formed with a shape memory alloy or a material with a larger expansion coefficient than the fragile portion and capable of generating stress that fractures the fragile portion by heat deformation, and

a heating means that performs heat deformation by heating the separation member until the fragile portion fractures.